which Applicant regards as the invention. The § 112 rejections of these claims are believed to be overcome as claim 15 has been cancelled and claim 34 has been amended to more specifically set forth the soft and hard grinding media.

Claims 1-4, 9-13, 15-16, 25, 27-30, 32, 38-41, 46-50, 52, 61, 64-66, and 68 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tatsuya et al. (JP 2000-271534). Furthermore, claims 5-8, 14, 17-24, 26, 31-37, 42-45, 51, 53-60, 62-63, and 67-70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatsuya et al. in view of Spencer et al. (United States Patent No. 6,242,056) in view of Murayama et al. (United States Patent No. 5,424,006), Schimmel et al. (United States Patent No. 5,585,427), and Zhao et al. (United States Patent No. 6,036,999).

Independent claims 1 and 38 have been amended to incorporate the claim elements from original dependent claims 5 and 42, respectively. As such, claims 1 and 38 now require that the clearcoat composition include the phosphorescent pigment such that exposure of the phosphorescent pigment to an external energy source is maximized. In view of these amendments, the Applicant relies on *In re Sang Su Lee*, which was decided by the United States Court of Appeals for the Federal Circuit (CAFC) on January 18, 2002[1], and respectfully traverses the Examiner's § 103(a) rejection.

In his rejection under § 103(a), particularly with respect to the rejection of original dependent claims 5 and 42, the Examiner correctly concedes that Tatsuya et al. does not specifically disclose that the phosphorescent pigment can be included within the clear coat of the composition film structure or that retroreflective microspheres can be included with

[1] 277 F.3d 1338 (Fed. Cir. 2002).

the layers. In view of this lack of disclosure by Tatsuya et al., the Examiner then concludes that Spencer et al. discloses a multilayer structure wherein a color containing base coat is covered by a curable resinous bead-containing light refractive tint layer that can include phosphorescent pigments, and that one skilled in the art would, therefore, have found it obvious to include phosphorescent pigments in the top layer of the composite structure of Tatsuya et al. This is not the case.

With respect to this § 103(a) rejection, the Examiner, ***without providing any objective evidence***, merely concludes that the motivation for including phosphorescent pigments in the top layer of the composite structure of Tatsuya et al. "would have been to provide maximum exposure of the phosphorescent pigment to the external light source." As evidence that the Examiner provides no objective support for this motivation, the Examiner actually relies on terminology from the Applicant's own application (***and not from the prior art references***) relating to maximizing the exposure of the phosphorescent pigment to the external light source to arrive at this supposed motivation. The Examiner further states, in a highly conclusory fashion, that one skilled in the art would also have found it obvious to incorporate retroreflective microspheres in the structure of Tatsuya et al. As described below, the Examiner cannot simply conclude what does and does not impart patentability to the method of amended claim 1 and to the coating system of amended claim 38 without the support of objective evidence.

In conjunction with the above, it is respectfully submitted that the Examiner has not established a *prima facie* case of obviousness.[2] To establish a *prima facie* case of

[2] The legal concept of *prima facie* obviousness allocates who has the burden of going

obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. MPEP 2142. The teaching or suggestion to make the claim combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.[3]

Under the first criteria of the *prima facie* case of obviousness, the recently decided case of *In re Sang Su Lee* clearly defines how suggestion and motivation are determined, and how the knowledge generally available to one skilled in the art is found. The CAFC in *In re Sang Su Lee* reviewed a decision from the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office. Both the Examiner and the Board agreed that Sang Su Lee's invention "would have been obvious to one of ordinary skill in the art since the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software," and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial." *Id.* at 1341. However, in this case, the CAFC made it abundantly clear that the Board's and the Examiner's conclusory statements did not adequately address the issue of motivation to modify a

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forward with production of evidence. The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. MPEP 2142

[3] *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991).

reference or motivation to combine references. The factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. *Id.* at 1343. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. 330, 312-13 (Fed. Cir. 1983). The court in *In re Sang Su Lee* went on to state that the "common knowledge and common sense" on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. *In re Sang Su Lee,* 277 F.3d at 1342.

The CAFC also explained in *Zirco*, 258 F.3d at 1385, 59 U.S.P.Q. 2d at 1697, that "deficiencies of the cited references cannot be remedied by the board's general conclusions about what is 'basic knowledge' or 'common sense'". The Board, as well as the Examiner, must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q. 2d 1453, 1459 (Fed. Cir. 1998). Furthermore, in doing so, the USPTO cannot rely on that which is taught by the Applicant against the Applicant.

In his Office Action, as objective evidence, the Examiner relies on the fact that, based on the disclosure of Spencer et al., one would be motivated to include the phosphorescent pigments in the top layer of the composite structure of Tatsuya et al. to maximize the exposure of the phosphorescent pigment to the external light source. The

Applicant has reviewed both Tatsuya et al. and Spencer et al. in detail, including the portion of Spencer et al. specifically cited by the Examiner. Importantly, the bead-containing light refractive tint layer of Spencer et al., which includes the phosphorescent pigments, is not the outermost or top layer of Spencer et al. Instead, as discussed additionally below, the multilayer structure of Spencer et al. is subsequently covered by an additional resinous top coat.

The Applicant holds that the cited portions of both prior art references are irrelevant to the original dependent claims 5 (now amended independent claim 1) and original dependent claim 42 (now amended independent claim 38). Simply stated, neither of these prior art references provide objective evidence that would support incorporating the phosphorescent pigment in the clearcoat composition such that exposure of the phosphorescent pigment to the external energy source is maximized, and therefore, these references do not support the Examiner's determination of obviousness. Instead, the Examiner's determination of obviousness is based on the Applicant's own disclosure, which is not permitted as described above in relation to In re Vaeck.

As a more specific example, column 5, lines 3-8 of Spencer et al. (which was the portion of Spencer et al. cited by the Examiner) reads "[e]ach layer is baked to heat cure the resinous binder material" and "[f]inally a clear colorless or tinted curable resinous top coat is applied and baked to provide a hard protective, glossy exterior surface layer over the paint layer(s)." In terms of obviousness, these portions of Spencer et al. actually teach away from Tatsuya et al. and the claimed invention such that it can be argued that the other required element of the Examiner's *prima facie* case of obviousness relating to a reasonable

expectation of success is not satisfied. First, as alluded to above, Spencer et al. does not disclose, teach, or otherwise suggest incorporation of the phosphorescent pigment in the top layer. Instead, as evidence by the above quotation, Spencer et al. relies on an additional layer, specifically a top coat layer, after the layer that actually incorporates the phosphorescent pigment. Secondly, as evidenced by the first quotation above, Spencer et al. actually teaches away from Tatsuya et al. such that a rejection relying on the combination of the two references is improper because Spencer et al. does not disclose, teach, or suggest wet-on-wet application of compositions. Instead, in Spencer et al. "[e]ach layer is baked to heat cure the resinous binder material."

In his reliance on the prior art and in his rejection of original dependent claims 5 and 42, the Examiner is overlooking the commercial significance of the Applicant's invention as capture in amended claims 1 and 38. The subject invention includes two compositions, the color-providing composition and the clearcoat composition, that are applied in a wet-on-wet application to provide a phosphorescent coating system on a substrate, with the phosphorescent pigment in the outermost, or clear coat, layer to optimize the phosphorescence. As would be readily understood by those skilled in the art, such a phosphorescent coating system is commercially significant because to achieve an acceptable coating system, i.e., a coating system with acceptable appearance that is suitable for use in the automotive industry, the prior art references either incorporate the phosphorescent pigment below the clear coat layer or the prior art references require bakes or cures between each layer to maximize appearance (DOI and gloss). The prior art references are not wet-on-wet as claimed in the subject application. As proof of these facts,

Spencer et al. does not disclose, teach, or suggest incorporation of the phosphorescent pigment in the outermost layer and also requires bakes between each layer (see column 5, lines 3-4) to achieve adequate appearance and Tatsuya et al., which does disclose wet-on-wet application, does not disclose, teach, or suggest the inclusion of the phosphorescent pigment in the outermost layer. Instead, Tatsuya et al. keeps the phosphorescent pigment out of the outmost layer to maintain adequate appearance.

In sum, the Examiner's (1) conclusory statements and (2) citation of portions of the prior art references that actually teach away from each other and the subject invention do not satisfy the requisite burden of suggestion and motivation or knowledge generally available to one skilled in the art. As such, the Examiner has not satisfied his *prima facie* case of obviousness. That is, the Examiner does not have an adequate basis to conclude that it would be obvious to include phosphorescent pigments in the top layer of the composite structure.

As clearly set forth above, the Examiner has not established a *prima facie* case of obviousness because Tatsuya et al. and Spencer et al., taken individually or in combination, do not disclose, teach, or otherwise suggest the invention as now claimed in amended independent claims 1 and 38. As such, these claims are allowable and the remaining claims depend either directly or indirectly from the non-obvious features of these amended claims such that the dependent claims are also allowable.

It is respectfully submitted that the Application is now presented in condition for allowance, which allowance is respectfully solicited.

No fees are believed to be due. However, if necessary, the Commissioner is

authorized to charge Deposit Account No. 08-2789 for any additional fees or to credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS, P.C.

Date: 4/15/03

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CERTIFICATE OF MAILING

I hereby certify that the attached **Amendment** is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to **Mailstop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**, on **April 15, 2003**.

David M. LaPrairie

David M. LaPrairie

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VERSION OF CLAIMS WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please cancel claims 5, 15, and 42 as indicated below.

Please replace claims 1, 6, 7, 9, 13, 32, 34, 38, 43, 44, and 46 with the following:

1. (Amended) A method of providing a phosphorescent coating system on a substrate, said method comprising the steps of:

(A) applying a color-providing composition to the substrate thereby forming an uncured film layer of the color-providing composition; and

(B) applying an at least partially-transparent clearcoat composition wet-on-wet to the uncured film layer of the color-providing composition thereby forming an uncured film layer of the clearcoat composition on the uncured film layer of the color-providing composition, wherein the clearcoat composition comprises phosphorescent pigment such that exposure of the phosphorescent pigment to an external incident energy source is maximized;

[wherein] with at least one of the color-providing composition and the clearcoat composition [is] being cross-linkable[, and at least one of the color-providing composition and the clearcoat composition comprises phosphorescent pigment to provide the phosphorescent coating system on the substrate].

Please cancel claim 5.

6. (Amended) A method as set forth in claim [5] 1 wherein the step of applying the clearcoat composition comprising the phosphorescent pigment is further defined as applying a clearcoat composition comprising from 5 to 30 parts by weight of the phosphorescent pigment based on 100 parts by weight of the clearcoat composition.

7. (Amended) A method as set forth in claim [5] further comprising the step of simultaneously curing the uncured film layers of the pigmented basecoat composition and the clearcoat composition to provide the phosphorescent coating system with the phosphorescent pigment in the clearcoat composition.

9. (Amended) A method as set forth in claim 1 wherein the step of (A) applying the color-providing composition is further defined as applying a pigmented basecoat composition to the substrate wherein the pigmented basecoat composition also comprises the phosphorescent pigment and the uncured film layer of the color-providing composition is formed of the pigmented basecoat composition comprising the phosphorescent pigment.

13. (Amended) A method as set forth in claim 12 further comprising the step of simultaneously curing the uncured film layers of the pigmented basecoat composition, comprising the phosphorescent pigment, and the clearcoat composition comprising the phosphorescent pigment to provide the phosphorescent coating system with the phosphorescent pigment in both the pigmented basecoat composition and the clearcoat

composition.

Please cancel claim 15.

32. (Amended) A method as set forth in claim 1 further comprising the step of incorporating the phosphorescent pigment into [at least one of the color-providing composition and] the clearcoat composition prior to the step of (B) applying the at least partially-transparent clearcoat composition to reduce an average particle size of the phosphorescent pigment and any agglomerates of the phosphorescent pigment to less than 10 microns.

34. (Amended) A method as set forth in claim 32 wherein the step of incorporating the phosphorescent pigment into the clearcoat composition is further defined as grinding the phosphorescent pigment and the clearcoat composition with grinding media selected from the group consisting of [soft grinding media, hard grinding media,] sand, glass, alumina, zirconia beads, nylon beads, styrene beads, rubber beads, plastic beads, and combinations thereof to reduce the average particle size of the phosphorescent pigment and any agglomerates of the phosphorescent pigment to less than 10 microns.

38. (Amended) A phosphorescent coating system comprising:

a substrate;

a color-providing film layer formed from a color-providing composition applied to said substrate; and

an at least partially-transparent clearcoat film layer formed from an at least partially-transparent clearcoat composition applied wet-on-wet to said color-providing composition as said color-providing composition is uncured, wherein said clearcoat composition comprises phosphorescent pigment such that exposure of said phosphorescent pigment to an external energy source is maximized;

[wherein] with at least one of said color-providing composition and said clearcoat composition [is] being cross-linkable[, and at least one of said color-providing composition and said clearcoat composition comprises phosphorescent pigment].

Please cancel claim 42.

43. (Amended) A phosphorescent coating system as set forth in claim [42] 38 wherein said clearcoat composition comprises from 5 to 30 parts by weight of said phosphorescent pigment based on 100 parts by weight of said clearcoat composition.

44. (Amended) A phosphorescent coating system as set forth in claim [42] 38 wherein said pigmented basecoat composition and said clearcoat composition are simultaneously cured to form said pigmented basecoat film layer and said clearcoat film layer, respectively.

46. (Amended) A phosphorescent coating system as set forth in claim 38 wherein said color-providing film layer is further defined as a pigmented basecoat film layer formed from a pigmented basecoat composition also comprising said phosphorescent pigment and being applied to said substrate.